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USPT	115 same (advantag\$ or useful\$)	0	<a href="#"><u>L16</u></a>
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USPT	111 same (advantag\$ or useful\$)	0	<a href="#"><u>L14</u></a>
USPT	112 same (advantag\$ or useful\$)	0	<a href="#"><u>L13</u></a>
USPT	111 same vector\$	3	<a href="#"><u>L12</u></a>
USPT	capping near0 independent	9	<a href="#"><u>L11</u></a>
USPT	capping near0 independent near0 manner	0	<a href="#"><u>L10</u></a>
USPT	18 same (advantag\$ or useful\$)	1	<a href="#"><u>L9</u></a>
USPT	17 same (expression near0 vector)	11	<a href="#"><u>L8</u></a>
USPT	IRES near0 sequence	81	<a href="#"><u>L7</u></a>
USPT	15 same (advantag\$ or useful\$)	15	<a href="#"><u>L6</u></a>
USPT	14 same cleavage	607	<a href="#"><u>L5</u></a>
USPT	SpeI or SalI	5586	<a href="#"><u>L4</u></a>
USPT	TCR near0 expression near0 cassette	1	<a href="#"><u>L3</u></a>
USPT	TCR near0 beta near0 expression near0 cassette	0	<a href="#"><u>L2</u></a>
USPT	TCR near0 alpha near0 expression near0 cassette	0	<a href="#"><u>L1</u></a>

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Terms	Documents
13 same (T near0 cell near0 receptor)	4

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13 same (T near0 cell near0 receptor)

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USPT	13 same (T near0 cell near0 receptor)	4	<a href="#">L4</a>
USPT	12 same TCR	41	<a href="#">L3</a>
USPT	expression near0 vector\$	17168	<a href="#">L2</a>
USPT	TCR near0 expression near0 vector\$	0	<a href="#">L1</a>

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Terms	Documents
11 same (advantag\$ or useful\$)	10

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11 same (advantag\$ or useful\$)

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<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT	11 same (advantag\$ or useful\$)	10	<u>L2</u>
USPT	IRES near0 sequence\$	84	<u>L1</u>

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Generate Collection

L4: Entry 3 of 4

File: USPT

Aug 17, 1999

DOCUMENT-IDENTIFIER: US 5939400 A

TITLE: DNA vaccination for induction of suppressive T cell response

## DEPR:

The V.beta.8.2 gene of the T cell receptor was cloned in an expression vector and injected three times at weekly intervals into the tibialis anterior muscle of PL/J female mice, beginning one week following a single intramuscular injection of cardiotoxin. Control PL/J mice were immunized once with cardiotoxin and then at weekly intervals with the DNA coding for the V.beta.5.1 variable region of the TCR. This TCR V region is not found on pathogenic T cell clones in H-2.sup.u mice. Following this immunization protocol, all mice were immunized with complete Freund's adjuvant containing either the myelin basic protein peptide Acl-20, or guinea pig MBP. The mice vaccinated with the V.beta.8.2 DNA were resistant to experimental autoimmune encephalitis (EAE) induced by the Acl-20 peptide, while EAE was induced in the groups vaccinated with the control V.beta.5.1 DNA, or with cardiotoxin alone. Only one mouse out of 14 vaccinated with the V.beta.8.2 DNA developed mild paralysis of the hind limbs, while 11/15 and 10/13 mice were paralyzed or died in the respective control groups ( $p < 0.0001$ ), following immunization with pAcl-20. The data is shown in Table 1 and FIG. 1A.

**WEST****End of Result Set**

Generate Collection

L4: Entry 4 of 4

File: USPT

Aug 4, 1998

DOCUMENT-IDENTIFIER: US 5789208 A  
TITLE: Polyclonal antibody libraries

## DEPR:

Another embodiment of the invention is directed to a method for creating a library of receptor proteins or any proteins which show variability. Receptor proteins which may be utilized in this method may be any eukaryotic or prokaryotic proteins which have variable regions including T-cell receptors such as the TcR, B-cell receptors including immunoglobulins, natural killer cell (NK) receptors, macrophage receptors and parts and combinations thereof. Briefly, a sample of biological tissue, such as normal tissue, neoplastic tissue, infected tissue, tissues containing extracellular matrix (ECM) proteins, or any abnormal tissue, is introduced to a cell population capable of producing the receptor proteins. The cell population is fixed and the cells permeabilized. The variable region mRNAs of the receptor proteins are reverse transcribed into cDNA sequences using a reverse transcriptase. The cDNA sequences are PCR amplified and linked, preferably by hybridization of complementary sequences at the terminal regions of these cDNAs. The linked sequences are PCR amplified to create a population of DNA fragments which encode the variable regions of the receptor proteins. These DNA fragments contain the variable regions linked, preferably, in a head-to-head transcriptional orientation and are cloned in-mass into expression vectors. Useful expression vectors include phages such as display phages, cosmids, viral vectors, phagemids or combinations thereof, and the vectors transformed into host organisms and the different populations of organisms expanded. The expression vectors which encode the recombinant receptor proteins are selected and the sub-population expanded. The sub-population may be subcloned into expression vectors, if necessary, which contain receptor constant region genes in-frame and the library again expanded and expressed to produce the sub-library of selected receptor proteins. Chimeric libraries can be easily created by cloning the selected variable region genes into expression vectors containing constant region genes of other proteins such as antibody constant region genes or T cell receptor genes. The selected sub-libraries can be used directly or transferred to other expression vectors before transfection into host cells. Host cells may be T cells derived from the patient which, when introduced back into the patient, express the receptor library on their surface. This type of T cell therapy can be used to stimulate an immune response to treat the same diseases as those described for antibody therapy.

=> s TCR(w)expression (w) vector

L1 4 TCR(W) EXPRESSION (W) VECTOR

=> d bib ab l1 1-4

L1 ANSWER 1 OF 4 MEDLINE  
AN 1999008315 MEDLINE  
DN 99008315 PubMed ID: 9794213  
TI A retroviral vector that directs simultaneous expression of alpha and  
beta T cell receptor genes.  
AU Pogulis R J; Pease L R  
CS Department of Immunology, Mayo Foundation for Education and Research,  
Rochester, MN 55905, USA.  
SO HUMAN GENE THERAPY, (1998 Oct 10) 9 (15) 2299-304.  
Journal code: A12; 9008950. ISSN: 1043-0342.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 199901  
ED Entered STN: 19990115  
Last Updated on STN: 19990115  
Entered Medline: 19990105  
AB The transfer of alpha/beta T cell receptor (TCR) genes into T lymphocytes  
or their precursors could provide a means to increase frequency of tumor-  
or pathogen-specific cytotoxic T lymphocytes. To begin to address this  
possibility, we have used class I MHC-restricted alpha/beta TCR cDNAs to  
develop a retroviral **TCR expression vector**.  
Alpha- and beta-chain cDNAs were inserted into a derivative of the LN  
series of retroviral vectors, with the retroviral LTR directing  
expression  
of TCR-beta and an internal cytomegalovirus promoter/enhancer driving  
TCR-alpha expression. The variable region fragments can be replaced using  
unique restriction sites that have been introduced into the proximal  
constant regions. We have used this vector system to transfer two  
different pairs of alpha/beta TCR genes into an alpha- and  
beta-chain-deficient T cell hybridoma. TCR- hybridoma cells were  
transduced by coculture with pools of virus-producing cells, and  
fluorescence-activated cell sorting was used to enrich for cells  
expressing the transduced TCR. Transduction with either alpha/beta TCR  
restores stable, long-lived expression of the alpha/beta TCR complex.  
TCR-mediated signal transduction is also reconstituted, as demonstrated  
by  
the ability of transduced cells to secrete IL-2 following stimulation  
with  
Vbeta-specific antibodies. Our results suggest that alpha/beta T cell  
receptor gene transfer could provide a basis for new approaches to  
immunotherapy, and that further studies examining the in vivo fate of  
transduced TCR are possible.